



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

20NR-72

Job Sheet 191272



Part No: 20NR-72

Job Qty: 6 pcs

Part Name: Light Release Pivot Bushing



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/25/19

Job Tracking No:

Due Date: 5/10/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 20NR-72 Rev. 1A IPP Rev. A 18.06.15 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Conventional Lathe - 1	6 pcs	5/10/19	5/10/19	0.00	0.60	Conventional Lathe - 1		Fred 71
							Conventional Lathe - 2		9-89
120	QC 2	6 pcs	5/10/19	5/10/19	0.00	0.00	QC 2 - 1		Fred 71
							QC 2 - 12		9-89
							QC 2 - 14		DAS 71
							QC 2 - 17		9-89
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 54		
							QC 2 - 56		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		

Dart Aerospace Ltd.
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CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Container No: S170380



Part: 20NR-72

Job No: 191272

Serial No/Batch: S170380

Revision: 1A

Inspector:

Exp Date:

Instructions:

Date: 04/08/19

130	QC 8	6 pcs	5/10/19	0.00 0.00	QC 2 - 66	
					QC 2 - 64	
					QC 8 - 12	
					QC 8 - 14	mk 19/04/09
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
150	Outsource - 15 - Nickel Plate	6 pcs	5/10/19	0.00 0.00		04/09/2019 PL
160	Packaging 2-1 - Receive - B4B	6 pcs	5/10/19	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	DP APR 15 2019
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Plex 2/25/19 3:25 PM Dart.lajeunesse.marie	

mK 12/10 4/09

04/09/2019 PL

DP APR 15 2019

170 QC 6	6 pcs	5/10/19	0.00 0.00	Packaging 2 - 36 - B4B	
				QC 6 - 42	DAS
				QC 6 - 9	APR 16 2019 40
				QC 6 - 68	9-89
180 Packaging 3-1 - Stock - B4B	6 pcs	5/10/19	0.00 0.00	QC 6 - 61	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	DAS
				Packaging 3 - 6 - B4B	28
				Packaging 3 - 7 - B4B	9-89
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	6 pcs	5/10/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	APR 18 2019 DAS
				QC 21 - SA - 53	70
9-89					
Part Op 110 - (Manufacture as per dwg)1-Machine as per DWG. 2-Deburr					
Descriptions: 120 - (QC2- Inspect parts off machine FAI/FAIB)					
130 - (QC8- Inspect parts - second check)					
150 - (Outside Processing - Nickel Plate)-Issue P/O to GROUPE ALTECH: P/O 043152 -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004- .0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required					
160 - (Receive & Inspect for Damage & Mat'l Certs)					
170 - QC6- All purchased or subcontracted products					
180 - (Identify as per dwg & Stock Location: _____)Bag and label with batch number.					
190 - (QC21- Final Inspection - Work Order Release)					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140-R0.500	4140 Steel Round Bar 0.500"	.5940 ft (.099 ea)	110-Conventional Lathe - 1	5040571

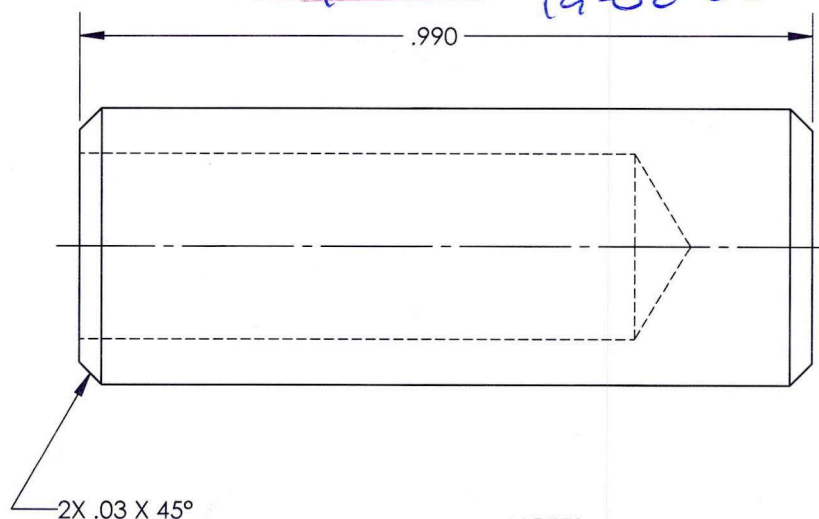
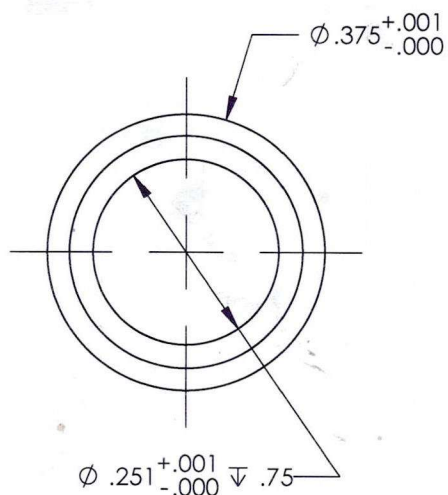
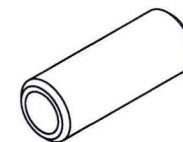
Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Conventional Lathe - 1	MT-4140-R0.500	1	21	0
Part Specifications				
Specifications could not be found.				

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		AS DRAWN BY CANAM	7/18/2013	CFS	
1A	14-0102	CH'D TITLE BLOCK WAS RED BARN IS DART. ADDED BAG & LABEL NOTE.	7/30/2014	DJN	RW

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 191272 MJS
19-02-26



NOTES:

1. NICKEL PLATE .0004 - .0006, BAKE AFTER PLATING.
2. BAG & LABEL WITH BATCH NUMBER.

USED ON
20NR
8NR

DART AEROSPACE	
TITLE LIGHT RELEASE PIVOT BUSHING	
DWG NO. 20NR-72	REV 1A
MAT'L 4140	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .005 .XX ± .01 .X ± .1	HEAT TREAT FINISH SEE NOTE 1
FRACTIONS ± 1/32 ANGLES ± 5°	SPEC
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL
SCALE 4:1	DATE 4/1/1997
SHEET 1 OF 1	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			20NR-72	1	LIGHT RELEASE PIVOT BUSHING	4140	Ø3/8 X 1-1/8

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QS1042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Dart Aerospace Ltd.
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Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043152



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO043152

PO Date: 4/9/19

Due Date: 4/15/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	192960	20NR-54	Lock Bearing Pin -Issue P/O; -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required	Firmed - X20	-	4/15/19	20 pcs	0 pcs	20 pcs	\$6.666/pcs	\$133.32

APR 15 2019

DP

Line Item Note *** NEED BACK APRIL 15,2019 ***

2	191272	20NR-72	Light Release Pivot Bushing (Outside Processing - Nickel Plate)-Issue P/O to GROUPE ALTECH: P/O -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required	Firmed - X6	-	4/15/19	6 pcs	0 pcs	6 pcs	\$6.666/pcs	\$40.00
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APR 15 2019

DP

Line Item Note *** NEED BACK APRIL 15,2019 ***

DAS
40
9-89



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PURCHASE ORDER

PO043152



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	190624	20NR-93	Stop Block -Issue P/O; -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required	Firmed	-	4/15/19	10 pcs	0 pcs	10 pcs	\$6.666/pcs	\$66.66

Line Item Note *** NEED BACK APRIL 15,2019 ***

Grand Total: \$239.98

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/10/19 8:47 AM dart.Lussier.Patrick



Certificat de Conformité / Certificate of Compliance

(018362-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.groupaltech.com

Bon de Livraison / Packing Slip

018362 - 1

Livré à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, K6A1K7
CANADA
Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, K6A1K7
CANADA
BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courtier / Acc. No.		Bon de commande Client Customer Purchase Order No.					
11-Apr-2019		SVETLANA DORZHIYEVA				043152				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Quantités / Quantities Exp/ Shipped Qté NC/ NC Qty Qté Scrap/			A venir / Back Order		
1	20NR-54 Rev.	20NR-54 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 GRADE E OR F NICKEL PLATE 0.0004 TO 0.0006 BAKE AFTER PLATING	E-NICKEL-200 CH	20	20	0	0	0		
2	20NR-72 Rev.	20NR-72 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 GRADE E OR F 0.0004-0.0006 THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	6	6	0	0	0		
3	20NR-93 Rev.	20NR-93 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 GRADE E OR F NICKEL PLATE 0.0004 TO 0.0006 BAKE AFTER PLATING	E-NICKEL-200 CH	10	10	0	0	0		

DAS
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9-89

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.